

CLAIMS

What is claimed is:

1. A method comprising the acts of:

illuminating a target with at least a first illumination source;

taking a first image of the target using an image recording device;

illuminating the target with at least a second illumination source;

taking at least a second image of the target using said image recording device; and

processing said first and at least a second image using a data processing device and extracting information of interest about the target.

2. The method of claim 1 wherein the image recording device includes a camera.
3. The method of claim 2 wherein the camera comprises a video camera.
4. The method of claim 1 wherein said data processing device includes a computer.

5. The method of claim 1 wherein extracting information of interest about the target comprises determining an edge of at least a portion of the target.
6. The method of claim 3 wherein processing said first and at least a second image using a data processing device comprises superpositioning of the first image and the second image.
7. The method of claim 1 wherein the first illumination source comprises using a diffuse on-axis light source.
8. The method of claim 1 wherein the at least a second illumination source comprises an ultraviolet light source.
9. The method of claim 8 further comprising the act of providing a filter disposed between the target and the at least a second illumination source to block visible light.
10. The method of claim 9 wherein the filter blocks wavelengths of light greater than 390 nanometers.

11. The method of claim 1 further comprising the act of providing a filter disposed between the camera and the target.
12. The method of claim 11 wherein the filter blocks ultraviolet light.
13. The method of claim 12 wherein the filter blocks light less than 410 nanometers.
14. The method of claim 13 wherein the filter blocks at least one portion of the visible light spectrum.

15. A system comprising

a camera;

a first illumination source;

at least a second illumination source; and

a computer, connected to the camera, to receive an image from the camera, wherein the camera is capable of taking a first image of a target illuminated by at least the first illumination source, and further capable of taking a second image of the target illuminated by at least the second illumination source and wherein the first and second images are able to be analyzed in the computer.

16. The system of claim 15 wherein the camera comprises a video camera.

17. The system of claim 15 wherein the analysis by the computer comprises determining an edge of at least a portion of the target.

18. The system of claim 15 wherein the analysis by the computer comprises superposition of the first image and the second image.

19. The system of claim 15 wherein the first illumination source comprises a diffuse on axis light source.
20. The system of claim 15 wherein the second illumination source comprises an ultraviolet light source.
21. The system of claim 20 further comprising at least one filter disposed between the target and the second illumination source, which filter blocks visible light.
22. The system of claim 21 wherein the filter blocks wavelengths of light greater than 390 nanometers.
23. The system of claim 15 further comprising at least one filter disposed between the camera and the target.
24. The system of claim 23 wherein the filter blocks ultraviolet light.
25. The system of claim 24 wherein the filter blocks light with a wavelength shorter than 410 nanometers.
26. The system of claim 25 wherein the filter blocks at least one portion of the visible spectrum.

27. A method comprising:

providing a camera connected to a computer having storage, an input to receive at least first and second images and an output providing extracted image information;

providing a filter disposed between the camera and the target, which filter blocks ultraviolet light;

using the camera to obtain a first image of the target and sending the image to the computer while the target is illuminated by a first illumination source comprising a diffuse on-axis light;

using the camera to obtain a second image of the target and sending the image to the computer while the target is illuminated by at least a second illumination source comprising an ultraviolet light; and

using the computer to analyze the first and second image to extract information about the target.

28. A method comprising:

providing a camera connected to a computer having storage, an input to receive at least a first image and an output providing extracted image information;

providing a filter disposed between the camera and the target, which filter blocks visible light;

using the camera to obtain a first image of the target and sending the image to the computer while the target is illuminated by a first illumination source comprising an ultra-violet light; and

using the computer to analyze the first image to extract information about the target.

29. A system comprising

a camera;

a target illumination source comprising an ultraviolet light source;

a filter disposed between the camera and said target;

and

a computer, connected to the camera, to receive an image from the camera, wherein the camera is capable of taking at least first image of said target illuminated by said ultraviolet light source, and wherein the first image is able to be analyzed in the computer to extract information about the target.

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